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Important Steps to Decrease the Incidence of Women's Breast Cancer

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Abstract

Breast cancer is a disease occurring once cells in the organ's tissues grow and split in an abandoned process known as a tumor. Despite recent significant advances in diagnosis and treatment, breast cancer remains a problem for societies and individuals. There are several reasons for this, including a lack of information about the mechanism and heterogeneity of breast carcinogenesis cases, despite developments in the treatment modes like hormone therapy, chemo-radiotherapy and surgery. The female human organs' breasts, lobules, ducts and nipples are colonized by a range of bacteria throughout lactation time and numbers of those can yield carcinogenesis and/or stimulate inflammatory processes. Effective prevention programs decrease the occurrence of this cancer by protecting and defending women from evolving cancer disease and avoiding its return by reducing the occurrence of breast cancer by more than 11%, through breastfeeding as an essential protective factor in prevention programs. This article introduces protective steps that may reduce breast cancer occurrence, by expressing women's breast milk using a breast pump device for drawing milk at least annually and using appropriate antibiotics for women who don't breastfeed.



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Dear Editor,

Breast cancer is a dangerous disease occurring once cells in the organ's tissues grow and split in an abandoned process, producing a mass of tissues known as a tumor. Signs of this disease can comprise seeing variations in the skin on the breasts, the sensation of a lump, and experiencing changes in breast size. Breast cancer like other cancers can be diffused and produced in the tissues surrounding the breast. It can also transform into other parts of the human body and forms a new tumor. Breast cancer can occur at any age, but is most often diagnosed in adults over 50 years in most countries. In the United States of America, this disease is the second highest reason causing death in females, after "lung cancer", and it's also the leading cause of death by cancer among females ages 35 to 54 [1, 2].

The primary job of the breast is the milk production for breastfeeding women who are pregnant or recently gave birth through the "lactation process through hormones that signal the mammary glands" in women's bodies to begin making the milk and feeding the baby. Sometimes women's breasts produce milk even for women who have never been pregnant or breastfeeding. This condition is called "Galactorrhea" and can happen for different reasons. The milk can result from one or both breasts. Men can have galactorrhea, too, but it is more common in women. This process occurs in around 20 to 25% of women [3, 4]. The female's human organs' breasts, lobules, ducts, and nipples can be colonized by a range of bacteria, and not just throughout lactation times. The bacteria seem to reach the breast commonly via the nipple, but some travel from the oral micro-biome and gut, most likely through dendritic cells. The ability of bacteria to gain access to mammalian ducts, possibly done by numerous mechanisms, increases the possibility that such processes may be harmful to the host. Among the organisms isolated from the mammary lobes and ducts, a number of them can result in carcinogens and/or stimulate inflammatory processes [5-8]. Investigation of breast milk provides opportunities to know mechanisms associated with breast carcinogenesis and to recognize risk markers that may help identify women at high risk early in the carcinogenic process. In addition, breast milk examination can be of value in early breast cancer diagnosis or detection [9, 10]. The most common breast cancers like invasive carcinoma and ductal carcinoma *in situ* (DCIS) are adenocarcinoma because cancers begin in the gland cells of the milk lobules or ducts (Fig. 1). Other sorts of cancer can initiate in different breast cells, so it is

not considered breast cancer such as sarcoma or angiosarcoma [11]. Primary breast cancer avoidance aims to protect human females from evolving cancer of the breast. Secondary avoidance of breast cancer aims to avoid the return of this disease. For long-term public health potential, the primary program offers the biggest cost-effective cancer control program and prevents 50% of breast cancer at maximum benefit.

Researchers have recognized physiological, environmental, and lifestyle reasons and risk factors like genetic factors, family history of breast cancer, personal history of breast cancer, exposure to therapeutic ionizing radiation, hormonal and reproductive factors, therapeutic or exogenous estrogen hormones, postmenopausal hormone therapy, birth control pills, reproductive history, genetic mutations, age, weight (obesity), dense breasts, and alcohol consumption connected to breast cancer occurrence. Some of which are regulated through preventive interventions, added to provide a protective effect factor for breast cancer like breastfeeding, and physical activity [13-20]. Experts suggest that breastfeeding can decrease the occurrence of breast cancer by up to 11% [14-15]. Other emerging ways to prevent this disease is "cancer vaccines", which could play an effective role in treatment in the future, despite the difficulty in determining the nature of tumor self-antigens [21]. According to the role of breastfeeding in reducing the incidence of women's breast cancer, and the infection of human breast, lobules, ducts, and nipples by the colonization of a wide variety of bacteria with a number of them having the ability to yield carcinogens or stimulate inflammatory processes. The article suggests expressing breast milk using a breast pump device for drawing milk at least annually and using appropriate antibiotics for

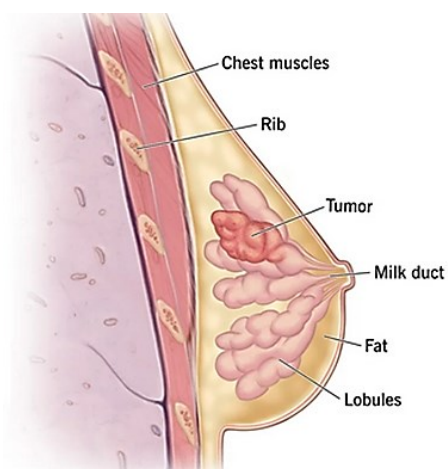


Fig. 1 The tumors of breast cancer advance when breast cells mutate and grow [12].

women who don't breastfeed, these steps can assist to decrease the incidence of women's breast cancer as a protective factor.

Conclusions

Effective prevention programs supply the ability to decrease the occurrence of breast cancer by defending women from evolving cancer disease and avoiding the return of the disease. Expressing breast milk using a breast pump device for drawing milk at least annually and using the appropriate antibiotics for women who don't breastfeed, these steps can be assisted to decrease the incidence of women's breast cancer as a protective factor.

Conflict of interest

The authors declare no conflict of interest.

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